

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously presented) A pattern forming method comprising steps of:

forming a liquid-repellent thin film on an electrically insulating surface, the liquid-repellent thin film being repellent to a liquid composition;

positioning the electrically insulating surface, a first nozzle and a second nozzle, the first and second nozzles being integrated, so that the first nozzle and the second nozzle are in a region located above a selected portion of the liquid-repellent thin film;

irradiating the selected portion of the liquid-repellent thin film with a plasma of a gas originating from the first nozzle to selectively provide affinity for the liquid composition to the selected portion, after the step of positioning the integrated first nozzle and second nozzle; and

applying the liquid composition to the selected portion by discharging a drop from the second nozzle by drop discharging method, after having irradiated the selected portion with the plasma,

wherein a predetermined pattern is formed by repeating said steps of positioning, irradiating, and applying.

2. (Previously presented) A pattern forming method comprising steps of:

forming a thin film having affinity for a liquid composition on an electrically insulating surface;

positioning the electrically insulating surface, a first nozzle and a second nozzle, the first and second nozzles being integrated, so that the first nozzle and the second nozzle are in a region located

above a selected portion of the thin film;

selectively irradiating the selected portion of the thin film with a plasma of a gas originating from the first nozzle to form a groove or a hole in the selected portion or to modify the surface roughness of the selected portion, after the step of positioning the integrated first nozzle and second nozzle;

forming a pattern by applying to the selected portion the liquid composition by discharging a drop from the second nozzle after having irradiated the selected portion with the plasma,

wherein a predetermined pattern is formed by repeating said steps of positioning, irradiating, and applying.

3. (Previously Presented) A pattern forming method according to claim 1, wherein the liquid composition comprises at least one selected from the group consisting of a conductive material, a resist material, a polymer material and a light emitting material.

4. (Previously Presented) A pattern forming method according to claim 1, wherein the liquid-repellent thin film is selected from the group consisting of a semiconductor film, a conductive film and a polymer film.

5. (Previously Presented) A pattern forming method according to claim 2, wherein the thin film having affinity for a liquid composition is selected from the group consisting of a silicon oxide film, silicon nitride film, a silicon oxynitride film and a metal oxide film.

6. (Previously Presented) A pattern forming method according to claim 1, wherein the irradiation with the plasma is performed at a pressure in a range of 1.3×10^1 to 1.31×10^5 Pa.

7-15. (Canceled)

16. (Previously Presented) A pattern forming method according to claim 2, wherein the liquid composition comprises at least one selected from the group consisting of a conductive material, a resist material, a polymer material and a light emitting material.

17. (Previously Presented) A pattern forming method according to claim 2, wherein the plasma irradiation is performed at a pressure in a range of 1.3×10^1 to 1.31×10^5 Pa.

18-22. (Canceled)

23. (Previously Presented) A pattern forming method comprising steps of:

positioning a surface, a first nozzle and a second nozzle, the first and second nozzles being integrated, so that the first nozzle and the second nozzle are in a region located above a selected portion of the surface;

irradiating the selected portion of the surface with a plasma of a gas originating from the first nozzle to selectively provide affinity for a liquid composition having electrical conductivity, after the step of positioning the integrated first nozzle and second nozzle;

forming a conductive film by applying the liquid composition having electrical conductivity

to the selected portion by discharging a drop from the second nozzle by drop discharging method, after having irradiated the selected portion with the plasma;

forming a mask pattern made of a resist composition over the selected portion; and

etching the conductive film selectively according to the mask pattern to form a conductive pattern by,

wherein a predetermined wiring pattern is formed by repeating said steps of positioning, irradiating, applying, mask pattern forming, and etching.

24. (Previously presented) A pattern forming method according to claim 23, wherein the gas is selected from the group consisting of He, Ne, Ar, Kr, Xe, oxygen, nitrogen and a combination thereof.

25. (Previously presented) A pattern forming method according to claim 23 wherein the mask pattern is formed by selectively applying the resist to the conductive pattern through a nozzle.

26. (Currently amended) A pattern forming method comprising steps of:

positioning a surface, a first nozzle and a second nozzle, the first and second nozzles being integrated, so that the first nozzle and the second nozzle are in a region located above a selected portion of the surface;

selectively irradiating the selected portion with a plasma of a gas originating from the first nozzle to form a groove in the selected portion or to modify the surface roughness of the selected portion, after the step of positioning the integrated first nozzle and second nozzle;

forming a conductive film by applying a liquid composition comprising a conductive material to the selected portion by discharging a drop from the second nozzle by drop discharging method, after having irradiated the first selected portion with the plasma;

forming a mask pattern made of a resist composition over the selected portion after having performed the drop discharging method; and

etching the conductive film selectively according to the mask pattern to form a conductive pattern [[by]],

wherein a predetermined wiring pattern is formed by repeating said steps of positioning, irradiating, applying, mask pattern forming, and etching.

27. (Previously Presented) A pattern forming method according to claim 26 wherein the gas is selected from hydrogen, CF_4 , NF_3 , SF_6 , oxygen and a combination thereof.

28. (Previously Presented) A pattern forming method according to claim 26 wherein the mask pattern is formed by selectively applying the resist to the conductive pattern through a nozzle.

29. (Previously Presented) A pattern forming method according to claim 1, wherein the application of the liquid composition is performed at a pressure in a range of 1.3×10^1 to 1.31×10^5 Pa.

30. (Previously Presented) A pattern forming method according to claim 2, wherein the application of the liquid composition is performed at a pressure in a range of 1.3×10^1 to 1.31×10^5

Pa.

31. (Previously Presented) A pattern forming method according to claim 23, wherein the etching is performed by locally discharging plasma from plural plasma discharge ports.

32. (Previously Presented) A pattern forming method according to claim 26, wherein the etching is performed by locally discharging plasma from plural plasma discharge ports.